

[Handwritten signature]



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,331	10/31/2003	Reid C. Danielson	17310-298007	9674
25764 7590 10/17/2005 FAEGRE & BENSON LLP PATENT DOCKETING 2200 WELLS FARGO CENTER MINNEAPOLIS, MN 55402			EXAMINER WATKO, JULIE ANNE	
			ART UNIT 2653	PAPER NUMBER
DATE MAILED: 10/17/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,331

Applicant(s)

DANIELSON ET AL.

Examiner

Julie Anne Watko

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 4-7, 14-21 and 23-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-13 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 26, 2005, has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 11-12 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Sony (JP 11-66766 A).

Regarding the limitation “for supporting a head slider over a disk surface in a rigid disk drive”: A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

As recited in claim 1, Sony shows a head suspension (see Fig. 9), the head suspension including a load beam having a mounting region (81b, rightward in Fig. 9), a rigid region (81c, leftward in Fig. 9) and a spring region (see 81a) located between the mounting region and rigid

Art Unit: 2653

region the head suspension comprising a shock limiter 31 formed solely of the material of the spring region of the load beam (see Fig. 8) and without additional mass added to the shock limiter, the shock limiter limiting movement of the head suspension away from the disk surface due to impact loading.

As recited in claim 11, Sony shows a load beam 81 comprising a single piece of material (see Fig. 8) including: a mounting region 81b; a rigid region 81c; a spring region 81a located between the mounting and rigid regions; and a shock limiter 31 formed solely of the material of the spring region and without additional mass added to the shock limiter and wherein the shock limiter is adapted to contact a portion 81c of the head suspension upon movement of the head suspension relative to the disk surface due to impact loading.

As recited in claim 12, Sony shows that the shock limiter 31 limits movement of the rigid region 81c of the load beam away from the disk surface due to impact loading.

As recited in claim 22, Sony shows a head suspension (see Fig. 9) including a load beam (see Fig. 8) having a mounting region 81b, a rigid region 81c and a spring region 81a located between the mounting region and rigid region, the head suspension comprising a shock limiter 31 formed solely of the same piece of material as the spring region of the load beam (see Fig. 8) and without additional mass added to the shock limiter, the shock limiter 31 including at least one bend (see 33) creating an overlap with a portion 81c of the head suspension to limit movement of the head suspension away from the surface of the disk.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2653

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-3, 8-13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berding (US Pat. No. 5936803).

Regarding the limitation “for supporting a head slider over a disk surface in a rigid disk drive”: A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

As recited in claim 1, Berding shows a head suspension (see Figs. 3-4) including a load beam 120 having a mounting region (right region in Fig. 4), a rigid region (left region in Fig. 4) and a spring region 122 located between the mounting region and the rigid region, the head suspension comprising a shock limiter (including 166) formed solely of the material (“stainless steel”, see col. 6, line 52-col. 7, line 3) of the spring region of the load beam, the shock limiter

Art Unit: 2653

limiting movement of the head suspension away from the disk surface (see col. 6, lines 63-67) due to impact loading.

As recited in claim 1, Berding is silent regarding the shock limiter being without additional mass added to the shock limiter; however, there is no invention in forming two known rigidly attached pieces as a single piece, absent evidence of unexpected results in combination with evidence that the integration or unification requires greater than ordinary skill in the art. In re Fridolph, 135 USPQ 319, 322 (CCPA 1962).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to unify the two rigidly attached steel pieces of Berding instead of adding mass by separately forming the pieces and attaching them. The rationale is as follows: one of ordinary skill in the art would have been motivated to simplify assembly by avoiding a welding step as is notoriously well known in the art.

As recited in independent claim 11, in addition to the above teachings, Berding shows the load beam 120 comprising a single piece of material ("thin sheet of stainless steel", see col. 7, lines 1-3).

As recited in claim 3 and independent claim 11, Berding shows that the shock limiter overlaps a portion of the head suspension and the shock limiter contacts the overlapped portion 110 of the head suspension upon movement of the head suspension away from the disk surface due to impact loading.

As recited in claims 8, 10 and independent claim 22, in addition to the above teachings, Berding shows the shock limiter including at least one bend creating an overlap (see 166 in Fig. 4) with a portion 110 of the head suspension.

Art Unit: 2653

As recited in claims 2 and 13, Berding shows that the spring region of the load beam includes an opening 116, and wherein the shock limiter comprises a cantilevered portion 165 formed within the opening.

As recited in claim 9, Berding shows that the head suspension includes a base plate 110 attached to the load beam at the mounting region, and the overlapped portion of the head suspension comprises a portion of the base plate such that the base plate is contacted directly by the shock limiter (“balancing member 160 may optionally include tabs or “limiters” 166 that **contact the base plate** 110 and mechanically limit the movement of the load beam 120 in a direction away from the disk 12”, see col. 6, lines 63-67 (emphasis added)) when the shock limiter is limiting movement of the head suspension away from the disk surface due to impact loading.

As recited in claim 12, Berding shows that the shock limiter limits movement of the rigid region of the lead beam away from the disk surface (“mechanically limit the movement of the load beam 120 in a direction away from the disk 12”, see col. 6, lines 63-67) due to impact loading.

Response to Arguments

7. Applicant's arguments filed July 26, 2005, have been fully considered but they are not persuasive.

Regarding Applicant's argument that “Applicants' shock limiter as presently claimed is formed solely of the material of the spring region, with no added mass”: The Examiner has considered this argument thoroughly and asserts that there is no non-obvious difference created by unifying two existing parts (the stainless steel shock limiter and the stainless steel mass) when

Art Unit: 2653

no unexpected results are thereby obtained, or when the unification would have been within the level of ordinary skill in the art at the time Applicant's disclosure was made.

Furthermore, the independent claims are anticipated by Sony as described above.

Regarding Applicant's assertion that "the shock limiter directly contacts the base plate ... in further contrast to the shock limiter of Berding which contacts the load beam layer, and does not contact the base plate directly": It is noted by the Examiner that Berding explicitly teaches that "balancing member 160 may optionally include tabs or "limiters" 166 that **contact the base plate** 110 and mechanically limit the movement of the load beam 120 in a direction away from the disk 12", see col. 6, lines 63-67 (emphasis added). Berding is silent regarding whether said contact is indirect; thus, the teaching "contact" means direct contact.

Conclusion

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (571) 272-7597. The examiner can normally be reached on Mon, Tue, Thu & Fri until 4:45PM, Wed until 3:30PM.

Art Unit: 2653

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Julie Anne Watko
Primary Examiner
Art Unit 2653

October 13, 2005
JAW

A handwritten signature in black ink, appearing to read 'Julie Anne Watko', written in a cursive style.